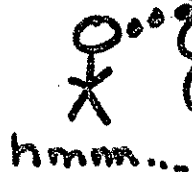


Subtracting Mixed numbers with Renaming

... in three easy steps!

Step 1: Write equivalent fractions by finding the LCD.

$$\begin{array}{r} 8\frac{1}{2} \times \frac{3}{3} = 8\frac{3}{6} \\ - 5\frac{2}{3} \times \frac{2}{2} = 5\frac{4}{6} \\ \hline \end{array}$$



I can't subtract $\frac{4}{6}$ from $\frac{3}{6}$, so I have to rename!

Step 2: Rename if necessary.

$$8\frac{3}{6} = 7\frac{6}{6} + \frac{3}{6} = 7\frac{9}{6}$$

... $8\frac{3}{6} = 7\frac{9}{6}$
yeah! now it is possible

Step 3: Find the difference & simplify if needed.

$$\begin{array}{r} 8\frac{1}{2} = 8\frac{3}{6} = 7\frac{9}{6} \\ - 5\frac{2}{3} = 5\frac{4}{6} = 5\frac{4}{6} \\ \hline \end{array}$$

$$\boxed{2\frac{5}{6}}$$

You can also subtract from a whole number!

$$7 - 2\frac{3}{4}$$

think of 7 as $6\frac{4}{4}$, now solve!

$$\begin{array}{r} 7 = 6\frac{4}{4} \\ - 2\frac{3}{4} = - 2\frac{3}{4} \\ \hline 4\frac{1}{4} \end{array}$$

Since the other fraction's denom. is 4, I'll use 4 as the new denom., too!

Examples

$$\begin{array}{r}
 1) \quad 4\frac{1}{3} = 4\frac{2}{6} + \frac{4}{6} = 4\frac{6}{6} \\
 - 2\frac{1}{2} = -2\frac{3}{6} \quad - 2\frac{3}{6} \\
 \hline
 \quad \quad \quad 1\frac{3}{6}
 \end{array}$$

$$\begin{array}{r}
 2) \quad 12\frac{1}{4} = 12\frac{3}{12} + \frac{12}{12} = 13\frac{15}{12} \\
 - 1\frac{2}{3} = -1\frac{8}{12} \quad - 1\frac{8}{12} \\
 \hline
 \quad \quad \quad 10\frac{7}{12}
 \end{array}$$

$$\begin{array}{r}
 3) \quad 4 = 3\frac{3}{3} \\
 - 1\frac{1}{3} = -1\frac{1}{3} \\
 \hline
 \quad \quad \quad 3\frac{2}{3}
 \end{array}$$

$$\begin{array}{r}
 4) \quad 9\frac{4}{4} = 9\frac{4}{4} \\
 - 5\frac{1}{4} = -5\frac{1}{4} \\
 \hline
 \quad \quad \quad 4\frac{3}{4}
 \end{array}$$

